From: **Ed Levine, NOAA SSC**
To: **Adm. R. E. Bennis, C.O.T.P Activities New York**
Subject: **Trajectory information and booming recommendations**
Date: **4 January, 2001**

NATIONAL WEATHER SERVICE FORECASTS
NEW YORK NY401 AM EST THU JAN 4 2001

NJZ006-NYZ072>077-042301-BRONX NY-HUDSON NJ-KINGS (BROOKLYN) NY-NASSAU NY-NEW YORK (MANHATTAN) NY-QUEENS NY-RICHMOND (STATEN IS.) NY-401 AM EST THU JAN 4 2001

TODAY A chance of flurries this morning...otherwise partly sunny. High in the mid 30s. West wind 10 to 15 mph.

TONIGHT Partly cloudy. Low in the mid 20s. Northwest wind 5 to 10mph shifting to the southwest.

FRIDAY Snow likely. Snow accumulation by late afternoon 1 to 2inches. High in the mid 30s. Chance of snow 70 percent.

Trajectory Analysis
Note: this trajectory is valid for one tidal cycle.

If a major release of oil from the GATX facility in the Tremley Point Reach region, just south of Pralls Island and across from Isle of Meadows, were to occur, because of the westerly component of the winds and a maximum flood tide of ~1 knot, the spilled product is expected to be confined to the western shoreline of Staten Island from buoy 34 to the southern shore of Pralls Island with a possibility of intrusion into the area between Pralls Island and Staten Island. On an ebb cycle, it is predicted that the oil would continue to be confined on the western shoreline of Staten Island but could travel up to two miles south of the Tremley Point Reach area impacting the Isle of Meadows.

Booming Recommendations:
With consideration that the vessel Highland Faith is docked at the GATX facility located within 3,000 feet of Isle of Meadows and 6,000 feet of Pralls Island, both identified as sensitive areas in the Area Contingency Plan.

If the U.S. Coast Guard considers there is a substantial risk of a large amount of either gasoline or bunker oils being released from this vessel the following recommendations are suggested in consultation with the trustee representative (New York State Department of Environmental Conservation):

1 – In order to contain as much spilled oil as possible and minimize the threat to the environment, the vessel should have reinforced boom deployed around it during transfer operations. This reinforcement should consist of double layering of deep-skirted boom, which should be tended to maintain its distance from the vessel, so as to improve its ability to capture floating oil.

2 – Contractors should be mobilized and equipment on standby to respond immediately to any oiled spilled.

3 – With the expectation at oil will escape from boom around the vessel, protection/deflection boom should also be pre-positioned at Pralls Island and the Isle of Meadows to protect the shorelines from impacts. At this time of year there are few birds in residence on these islands, however, within several months they become major rookeries in the area. It is vitally important to protect these areas from further degradation to maintain the viability of the habitat.

As a footnote, the relative expense of precautionary booming would be insignificant compared to response and damage assessment costs involved in cleaning up and restoring this area if there is a significant release of oil.

TAB J TO APPENDIX V TO ANNEX E TO THE NEW YORK/NEW JERSEY ACP STATEN ISLAND/THE KILLS

References: (a) Sensitivity of Coastal Environments & Wildlife to Spilled Oil - New York Harbor and Hudson River (b) NYSDEC Region II Contingency Plan.

1. **DESCRIPTION**: The Arthur Kill and Kill Van Kull are narrow waterways running along the west and north sides of Staten Island, respectively. The shorelines consist of heavy concentrations of industrial docks and wharves with mud flats comprising most of the undeveloped remaining areas. Numerous derelict vessels and rotting docks line the shorelines especially along Staten Island. Several small marinas are located along the Arthur Kill. Due to the highly industrialized nature of the area, several water intakes are located along the shorelines, especially in the vicinity of power plants and refineries. A listing of these water intakes is contained in reference (b).

2. **WATER CURRENTS**: Currents in the Arthur Kill are primarily tidal and move from low to medium velocities. Fairly strong currents are present in the Kill Van Kull. Maximum expected current velocity is 1.4 knots in the Arthur Kill and 2.7 knots in the Kill Van Kull.

3. **WATER INTAKES**: Oil may become entrained in water intake structures, causing extensive and expensive damage, and possible harm if the material is flammable or explosive. All precautions should be taken to prevent such materials from entering water intakes. In the event of a spill in the vicinity of a water intake the point of contact should be notified immediately. See page F-III-L-1 of this plan for POC information.

4. **SENSITIVE AREAS**: Within the Arthur Kill are wetland areas along the Staten Island shoreline which are very sensitive to oil spills. These are commonly known as Fresh Kills (Richmond Creek), Sawmill Creek, and Neck Creek. There are two waterfowl sensitive areas, Shooters Island and Pralls Island, which are the nesting grounds for many species of birds and are part of Harbor Herons Park, a rookery administered by the Audubon Society. The following information corresponds with Maps number 9, 9a and 9b of the Arthur Kill and Kill Van Kull. A strategy matrix for each area immediately follows the corresponding map.

MAP LEGEND
Priority Scale: **A** = Boom prior to oil impact
B = Protect after **A** areas
C = Protect after **B** areas
M = Marinas
R = Oil collection and recovery area
W = Water Intake-boom prior to oil impact
P = Pipeline

XXX = Protection or exclusionary techniques ineffective

Booming Method: **P** = Protection
D = Deflection
R = Recovery and Collection

Map: 9. Staten Island/The Kills map and strategy matrix
9a. Upper Arthur Kill and Kill Van Kull map and strategy matrix
9b. Lower Arthur Kill map and strategy matrix

MAP 9 TO TAB J TO APPENDIX V TO ANNEX E TO THE NY/NJ ACP
STATEN ISLAND/THE KILLS

E-V-J
MAP 9

STRATEGY MATRIX
REV: 20 NOV 98
STATEN ISLAND/THE KILLS

SENSITIVE AREA MAP 9		*BOOM METHOD/ MIN BOOM LENGTH IN FT*		*STAGING SITE MAP CODE PHONE NUMBER*	*IMPACT/ ACCESS*	
CODE	*SENSITIVE AREA NAME*					
A14	SHOOTERS ISLAND	P	8000	PORT AUTHORITY BEACH, STATEN ISLAND	E	B
A16	OLD PLACE CREEK	P	1500	ELIZABETH MARINA (M1) 908-828-4296	E	B/V
A19	PRALL'S CREEK	P	1200	NORTHVILLE LINDEN TERMINAL 908-862-5740	E	B
A20	SAWMILL CREEK	P	300	NORTHVILLE LINDEN TERMINAL 908-862-5740	E	B/V
A21	PRALLS ISLAND	P/D	7500	NORTHVILLE LINDEN TERMINAL 908-862-5740	E	B
A22	NECK CREEK	P	300	AMOCO OIL MARINE TERMINAL 732-541-5131 NORTHVILLE LINDEN TERMINAL 908-862-5740	E	B
A24	FRESH KILL	P/D	1600	AMOCO OIL MARINE TERMINAL 732-541-5131	E	B
A25	SMITH CREEK	P/D	300	MUNICIPLE BOAT RAMP	E/$	B/V
A26	WOODBRIDGE CREEK	P	600	MUNICIPLE BOAT RAMP	E	B/V
A27	RARITAN RIVER	P/D	5000	SANDY POINT BEACH	E/$	B/V
A57	SINGER FLAT	P/D	3500	ELIZABETH MARINA (M1) 908-828-4296	E/$	B/V
A61	LEMON CREEK	P/D	300	PRINCESS BAY/SAGUINE POINT	E	B/V
A63	MILL CREEK	P/D	900	TOTTENVILLE MARINA (M41) 718-948-7520	E	B
A66	ISLAND OF MEADOWS	D		AMOCO OIL MARINE TERMINAL 732-541-5131	E	B
A70	MT. LORETTO	D/R	300	PRINCESS BAY/SAGUINE POINT	E	B/V
A71	GATEWAY NATIONAL PARK	D	9500	PRINCESS BAY/SAGUINE POINT	E/$	B/V
A74	MARINERS MARSH	P/D	650		E	B
A75	SLATER PARK	P/D	300		E	B/V
A93	BRIDGE CREEK	P		ELIZABETH MARINA (M1) 908-828-4296	E	B/V
A94	OAKWOOD BEACH	P		PRINCESS BAY/SAGUINE POINT	E/$	B/V
A95	WOLFE'S POND PARK	P		PRINCESS BAY/SAGUINE POINT	E	B/V
B9	MOTBY	P/D/R	5000	MOTBY (B9) 201-823-5111	E/$	B/V
B15	ELIZABETH RIVER	P/D	1500	ELIZABETH MARINA (M1) 908-828-4296	E/$	B/V
B17	MORSES CREEK	P/D	1500	PHELPS DODGE 908-351-3200	E/$	B
B18	PILES CREEK	P/D	300	NORTHVILLE LINDEN TERMINAL 908-862-5740	E	B
B23	RAHWAY RIVER	P/D	1500	AMOCO OIL MARINE TERMINAL 732-541-5131	E/$	B/V
B30	GREAT KILLS HARBOR	P/D	1600	RICHMOND COUNTY YACHT CLUB (M5) 718-948-9615	E/$	B/V
B46	BODINE CREEK	P		MARINE POWER AND LIGHT (M57) 718-442-8018	E	B/V
B81	CONFERENCE HOUSE PARK			PRINCESS BAY/SAGUINE POINT	E	B/V
M1	ELIZABETH MARINA	P/D	500	ELIZABETH MARINA (M1) 908-828-4296	$	B/V
M5	GREAT KILLS HARBOR	P/D	1500	RICHMOND COUNTY YACHT CLUB (M5) 718-948-9615	E/$	B/V
M39	ATLAS YACHT CLUB	P	300	ATLAS YACHT CLUB (M39) 201-858-9605	$	B
M40	PERTH AMBOY MARINA	P	500	PERTH AMBOY MARINA (M40) 732-826-5000	$	B
M41	TOTTENVILLE MARINA	P	2000	TOTTENVILLE MARINA (M41) 718-948-7520	$	B/V
M42	SMITH CREEK MARINA				$	B
M43	STATEN ISLAND MARINA	P		STATEN ISLAND MARINA (M43) 718-442-8018	$	B/V
M50	ROBBINS REEF MARINA	P		ROBBINS REEF MARINA (M50) 201-858-6172	$	B/V
M57	MARINE POWER AND LIGHT			MARINE POWER AND LIGHT (M57) 718-442-8018	$	B/V
NOTES:						

BOOMING METHOD
D = DEFLECT
P = PROTECT
R = RECOVER

IMPACT
E = ENVIRONMENTAL
$ = ECONOMIC

ACCESS
B = BOAT
V = VEHICLE

PRIORITY [A]

SENSITIVE AREA SUMMARY

DATE 11/20/98

SITE # 21 MAP NUMBER: NY-9,9a,9b SITE NAME: Pralls Island

USGS QUAD: Arthur Kill, NY-NJ NOAA CHART # 12333, 12327 River Mile:

NOAA ESI ATLAS NY Harbor ESI MAP # 4 LATITUDE 40° 36' 30" NORTH LONGITUDE 074° 12' 00" WEST

AGENCY/CONTACT	EXPERTISE	PHONE
1 NYC Parks	1 Natural Resources Group	1 (212)360-1417
2	2	2
3	3	3

SITE DESCRIPTION SITE AREA: 88 acres TIDAL RANGE 5 - 6 ft MAX CURRENTS: ___ kts

GEOGRAPHIC LOCATION: Arthur Kill, northwest Staten Island

PHYSICAL DESCRIPTION: Uninhabited, densely wooded island with tidal wetlands around perimeter; large, undisturbed upland and wetland environme intertidal areas of peat/asphalt

SHORELINE TYPE (ESI) RANK

EXPOSED ROCKY SHORES	[ ]	COARSE SAND BEACHES	[ ]	EXPOSED TIDAL FLATS	[ ]	MARSHES	[X]
WAVE CUT PLATFORMS	[ ]	SAND AND GRAVEL BEACHES	[ ]	SHELTERED TIDAL FLATS	[ ]	MAN-MADE STRUCTURES	[ ]
FINE SAND BEACHES	[ ]	GRAVEL BEACHES/RIPRAP	[ ]	SHELTERED ROCKY SHORE	[ ]		

RESOURCES AT RISK SEASONAL CONSIDERATIONS: SPRING [A] SUMMER [A] FALL [ ] WINTER [ ]

WILDLIFE: Wading birds, including herons, egrets, and ibises; surface feeding coastal seabirds, including gulls; waterfowl, including ducks and gee

HABITAT: Important nesting area for large numbers of colonial waterbirds (especially herons) as there is a relative shortage of suitable nesting area the region; largest active heronry in the region and may comprise one of the largest in New York state

THREATENED/ ENDANGERED:

OTHER (RR): Managed by NY City Audubon Society as an urban wildlife refuge; one of three colonial waterbird rookeries within the Harbor Herons ecosystem; NY State Significant Coastal Habitat; NYC Parks Preserve; NYC Parks is conducting an extensive salt marsh resto

RESPONSE CONSIDERATIONS OWNERSHIP: City of New York

ACCESS:

VEHICLE [ ]

BOAT [X]

STAGING AREAS: Linden Northville Terminal - (732) 862-5740

COLLECTION POINTS:

OTHER (RC):

PROTECTION STRATEGIES

BOOM METHOD:

DEFLECT [X]

RECOVERY [ ]

PROTECTION [X]

DEGREE OF PROTECTIBILITY:

HIGH [ ]

LOW [ ]

MEDIUM [X]

MIN BOOM LENGTH 7500 ft

OTHER (PS

PRIORITY [A]

SENSITIVE AREA SUMMARY

DATE 11/20/98

SITE # 66 MAP NUMBER: NY-9, 9b SITE NAME: Island of Meadows

USGS QUAD: Arthur Kill, NY-NJ NOAA CHART # 12331, 12327 River Mile:

NOAA ESI ATLAS NY Harbor ESI MAP # 4 LATITUDE 40° 34' 30" NORTH LONGITUDE 074° 12' 10" WEST

AGENCY/CONTACT	EXPERTISE	PHONE
1 NYC Dept of Sanitation	1 Engineering/Phil Gleason	1 (212)837-8228
2 NYC Parks	2 Natural Resources Group	2 (212)360-1417
3	3	3

SITE DESCRIPTION SITE AREA: 101 acres TIDAL RANGE 5 - 6 ft MAX CURRENTS: ___ kts

GEOGRAPHIC LOCATION: Western Staten Island, at the confluence of the Arthur Kill and Fresh Kills Channel

PHYSICAL DESCRIPTION: Dredge spoil island with extensive areas of intertidal and high marsh along the northern and western shores; important wadi bird rookery

SHORELINE TYPE (ESI) RANK

EXPOSED ROCKY SHORES	[ ]	COARSE SAND BEACHES	[ ]	EXPOSED TIDAL FLATS	[ ]	MARSHES	[X]
WAVE CUT PLATFORMS	[ ]	SAND AND GRAVEL BEACHES	[ ]	SHELTERED TIDAL FLATS	[X]	MAN-MADE STRUCTURES	[ ]
FINE SAND BEACHES	[X]	GRAVEL BEACHES/RIPRAP	[ ]	SHELTERED ROCKY SHORE	[ ]		

RESOURCES AT RISK SEASONAL CONSIDERATIONS: SPRING [A] SUMMER [A] FALL [ ] WINTER [ ]

WILDLIFE: Wading birds, including herons, egrets, and ibises; gulls

HABITAT: Important nesting and feeding area for wading birds; Little Fresh Kills (north of the island) is a favorite foraging site for immature birds

THREATENED/ ENDANGERED:

OTHER (RR): One of three colonial waterbird rookeries within the Harbor Herons ecosystem; NY State Significant Coastal Habitat; NYC Dept of Sanita Wildlife Sanctuary; NYC Parks will be conducting extensive salt marsh restoration in this area in 1996

RESPONSE CONSIDERATIONS OWNERSHIP: NYC Parks, NYC Dept of Sanitation

ACCESS:

VEHICLE [ ] Route 440 / Victory Blvd

BOAT [X]

STAGING AREAS: AMOCO Marine Oil Terminal - (732) 541-5131

COLLECTION POINTS:

OTHER (RC): Entire shoreline fenced

PROTECTION STRATEGIES

BOOM METHOD:

DEFLECT [X]

RECOVERY [ ]

PROTECTION [ ]

DEGREE OF PROTECTIBILITY:

HIGH [ ]

LOW [ ]

MEDIUM [ ]

MIN BOOM LENGTH ___ ft

OTHER (PS